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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,542	12/02/2004	Osamu Ochino	Q85102	6989
23373 7590 07/25/2007 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
			EXAMINER KNABLE, GEOFFREY L	
			ART UNIT 1733	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/516,542	Applicant(s) OCHINO, OSAMU	
	Examiner Geoffrey L. Knable	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5-14-07</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 9, 2007 has been entered.

2. Claims 2-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The original disclosure only appears to define the belt formation in the invention in a process including spiral winding as well as extruding, each of the methods (1), (2) and (3) further being defined as using a small size apparatus (presumably the extruder?). The presently claimed formation methods now seem to read on any formation method using any device - they even seem to read on *calendering* cords and rubber (this being a laminating as suggested in method (1)). This however would not seem to be the intent of the invention read as a whole and as such, the claims at present are considered to recharacterize the invention in a manner that contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. it is considered to be new

matter. Note especially that it seems that the entire reason the described compounding was effected was to improve extrusion workability - there was no suggestion or indication that this compound was to be applied more broadly.

3. Claims 2-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The method steps of claim 14 remain very confusing and difficult to reconcile or understand consistent with the original disclosure and normal tire building. In particular, and as noted in the prior advisory action, applicant's description of these method steps have been carefully considered but ambiguities remain (and some new issues are raised). For example, the claims now define that the belt layer is formed on a rotating support, it being argued in particular that "the affixing of the band-shaped body means that the band-shaped body is wound on the rotating support so as to arrange these bodies side-by-side in the widthwise direction of the support (at a given inclination angle...)". This remains confusing as the only belt formation methods that would normally include *winding* a band on a support typically are those that are directed to forming what is typically called a spirally wound belt or cap ply (e.g. as in GB 1487426). Are the claims limited to this? The process used to form standard angled belts (with the cords at for example opposite angles of 21 degrees with respect to the equatorial plane of the tire) would however **not** normally be referred to as a winding process if a small width band is used. In particular, when using a small width band, such a belt would typically be built up by successively depositing cut pieces of the band material at an

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angle on a support (e.g. fig. 5 of EP 1174236 of record), the pieces being joined side by side. It however is not seen how this can be described as a winding process or reconciled with the originally disclosed methods. Additionally, method (3) is confusing as it is not clear *what* is occurring during tire shaping and in fact, it is still not clear what this "tire shaping" represents in this claim. Note that tires typically can either (1) be built cylindrically followed by toroidally shaping them and then transferring the toroidally shaped green tire into the mold for final curing/shaping; or (2) be built around an already toroidally shaped form followed by transferring to the mold for final curing/shaping. It is not even clear which, if either, of these methods are being described or even which of the various "shaping" steps that a tire undergoes during building is being referenced in method (3). Further, it is not clear how the claimed "covering" during shaping is related to the tire shaping - is this simply that they occur at the same "time"? Is this simply defining affixing the strip to the tire after toroidal tire shaping? Does this require a winding step? Clarification is therefore required of exactly what method steps are being performed and how any such argument is consistent with the original disclosure which stressed extrusion, "core shaping" (it is not clear what this is) and spiral winding. Note that spirally winding both cord reinforced as well as non-cord reinforced extruded strips is extremely well known in the tire building art for forming various tire components. The belt forming methods described by applicant however are very difficult to reconcile with tire building processes as would be understood by the ordinary artisan and therefore the scope of these requirements likewise is extremely difficult for the examiner to ascertain. It does not appear that applicant intended to define any new methods to form a tire belt

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but as described in the original disclosure, it is very difficult for the examiner to understand exactly what steps were contemplated in a manner that accurately reconciles all the parts of this disclosure. It would be helpful if applicant indicated how the disclosed "spiral winding", extrusion, etc., which seemed to be originally disclosed as requirements for all the methods, is reconciled with any arguments presented, especially given that the claims (esp. method (1)) now seem to be inclusive of building a belt by any method including simple standard calendaring.

4. Claims 6-8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1,487,426 to Bekaert taken in view of Sandstrom et al. (US 5,394,919) or Ravagnani et al. (US 4,239,663) and optionally further in view of Fischer (US 4,722,977 - newly cited).

These references (except newly applied Fischer) are applied herein for substantially the same reasons as of record. With respect to the viscosity, as noted in the prior first office action, the viscosity chosen would be a parameter within the routine selection of the artisan dictated by the application method chosen. In other words, extrusion processing of tire compounds is *extremely well known* and certainly well characterized by the artisan - that a certain upper limit on viscosity and thus workability of the compositions should be defined would therefore only represent routine and obvious selection by the artisan. In other words, that more viscous compounds are harder to work/extrude and less viscous ones extrude more easily is not unexpected and not considered to be outside the skill level of the ordinary artisan. Further, given that GB '426 to Bekaert suggests extruding the belt compound, ensuring that the

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viscosity is sufficiently low such that it can be suitably worked in the extruder would have been obvious and been expected to lead to only the expected results. Applicant has argued that there is no evidence that the artisan would understand the desire to have low viscosity for extrusion. As already noted, it is considered readily apparent that the artisan would routinely possess such an understanding. The patent to Fischer has been cited as exemplary further evidence of this understanding (col. 1, lines 13-26).

5. Claims 2-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1,487,426 to Bekaert taken in view of EP 481080 to Nakagawa et al. and optionally further in view of Fischer (US 4,722,977 - newly cited) and (for claims 2 and 9-13 only) optionally further in view of at least one of [Sharma (US 4,615,369) and Vasseur (US 5,871,597)].

These references (except newly applied Fischer) are applied herein for the same reasons as of record. With respect to the viscosity, as noted in the prior first office action, the viscosity chosen would be a parameter within the routine selection of the artisan dictated by the application method chosen. In other words, extrusion processing of tire compounds is *extremely well known* and certainly well characterized by the artisan - that a certain upper limit on viscosity and thus workability of the compositions should be defined would therefore only represent routine and obvious selection by the artisan. In other words, that more viscous compounds are harder to work/extrude and less viscous ones extrude more easily is not unexpected and not considered to be outside the skill level of the ordinary artisan. Further, given that GB '426 to Bekaert suggests extruding the belt compound, ensuring that the viscosity is sufficiently low

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6. Claims 3-8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1,487,426 to Bekaert taken in view of Grimberg et al. (US 2003/0221760) or Uchino et al. (US 2002/0088522) and optionally further in view of Fischer (US 4,722,977 - newly cited).

These references (except newly applied Fischer) are applied herein for the same reasons as of record. With respect to the viscosity, assuring a low viscosity is considered obvious alone or further in view of Fischer for the same substantive reasons as set forth in the above rejections.

7. Applicant's arguments filed 5-14-2007 have been fully considered but they are not persuasive.

These arguments have been addressed within the statements of rejection above.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Geoffrey L. Knable
Primary Examiner
Art Unit 1733

G. Knable
July 22, 2007